

REGULATION III - CONTROL OF AIR CONTAMINANTS

RULE 316

NONMETALLIC MINERAL PROCESSING

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Adopted 07/06/93
Revised 04/21/99
Revised 06/08/05

**MARICOPA COUNTY
AIR POLLUTION CONTROL REGULATIONS
REGULATION III - CONTROL OF AIR CONTAMINANTS**

**RULE 316
NONMETALLIC MINERAL PROCESSING**

SECTION 100 - GENERAL

- 101 PURPOSE:** To limit the emission of particulate matter into the ambient air from any nonmetallic mineral processing plant and/or rock product processing plant.
- 102 APPLICABILITY:** The provisions of this rule shall apply to any commercial and/or industrial nonmetallic mineral processing plant and/or rock product processing plant. Compliance with the provisions of this rule shall not relieve any person subject to the requirements of this rule from complying with any other federally enforceable New Source Performance Standards. In such case, the more stringent standard shall apply.

SECTION 200 - DEFINITIONS: See Rule 100 (General Provisions And Definitions) of these rules for definitions of terms that are used but not specifically defined in this rule. For the purpose of this rule, the following definitions shall apply:

- 201 AFFECTED OPERATION** - An operation that processes nonmetallic minerals or that is related to such processing and process sources including, but not limited to, excavating, crushers, grinding mills, screening equipment, conveying systems, elevators, transfer points, bagging operations, storage bins, enclosed truck and railcar loading stations, and truck dumping.
- 202 AGGREGATE TRUCK** – Any truck with an open top used to transport the products of nonmetallic mineral processing plants and/or rock product processing plants.
- 203 APPROVED EMISSION CONTROL SYSTEM** - A system for reducing particulate emissions, consisting of collection and/or control devices which are approved in writing by the Control Officer and are designed and operated in accordance with good engineering practice.
- 204 AREA ACCESSIBLE TO THE PUBLIC** - Any retail parking lot or public roadway that is open to public travel primarily for the purposes unrelated to the dust generating operation.
- 205 ASPHALTIC CONCRETE PLANT/ASPHALT PLANT** - Any facility used to manufacture asphaltic concrete by mixing graded aggregate and asphaltic cements.

- 206 BAGGING OPERATION** - The mechanical process by which bags are filled with nonmetallic minerals.
- 207 BATCH TRUCK** – Any truck that loads and transports products produced by batch.
- 208 BELT CONVEYOR** - A conveying device that transports material from one location to another by means of an endless belt that is carried on a series of idlers and routed around a pulley at each end.
- 209 BERMS AND GUARD RAILS** - A pile or mound of material along an elevated roadway capable of moderating or limiting the force of a vehicle in order to impede the vehicle's passage over the bank of the roadway.
- 210 BULK MATERIAL** - Any material including, but not limited to, earth, rock, silt, sediment, sand, gravel, soil, fill, aggregate less than two inches in length or diameter (i.e., aggregate base course (ABC)), dirt, mud, demolition debris, cotton, trash, cinders, pumice, saw dust, feeds, grains, fertilizers, fluff (from shredders), and dry concrete, that is capable of producing fugitive dust.
- 211 COHESIVE HARD SURFACE** – Any material including, but not limited to, pavement, recycled asphalt mixed with a binder, or a dust suppressant other than water applied and maintained as a roadway surface.
- 212 CONCRETE PLANT** - Any facility used to manufacture concrete by mixing water, aggregate, and cement.
- 213 CONVEYING SYSTEM** - A device for transporting materials from one piece of equipment or location to another location within a facility. Conveying systems include, but are not limited to, feeders, belt conveyers, bucket elevators and pressure control systems.
- 214 CRUSHER** - A machine used to crush any nonmetallic minerals including, but not limited to, the following types: jaw, gyratory, cone, roll, rod mill, hammermill, and impactor.
- 215 DISTURBED SURFACE AREA** - A portion of the earth's surface (or material placed thereupon) which has been physically moved, uncovered, destabilized, or otherwise modified from its undisturbed native condition, thereby increasing the potential for the emission of fugitive dust.
- 216 DRY MIX CONCRETE PLANT** - Any facility used to manufacture a mixture of aggregate and cements without the addition of water.
- 217 DUST GENERATING OPERATION** - Any activity capable of generating fugitive dust including, but not limited to, land clearing, earthmoving, weed abatement by discing or blading, excavating, construction, demolition, bulk material handling, storage and/or transporting operations, vehicle use and movement, the operation of any outdoor equipment, or unpaved parking lots. For the purpose of this rule,

landscape maintenance and playing on or maintaining a field used for non-motorized sports shall not be considered a dust generating operation. However, landscape maintenance shall not include grading, trenching, or any other mechanized surface disturbing activities performed to establish initial landscapes or to redesign existing landscapes.

- 218 DUST SUPPRESSANT** - Water, hygroscopic material, solution of water and chemical surfactant, foam, non-toxic chemical stabilizer, or any other dust palliative, which is not prohibited for ground surface application by the EPA or the Arizona Department of Environmental Quality (ADEQ), or any applicable law, rule, or regulation, as a treatment material for reducing fugitive dust emissions.
- 219 ENCLOSED TRUCK OR RAILCAR LOADING STATION** - That portion of a nonmetallic mineral processing plant where nonmetallic minerals are loaded by an enclosed conveying system into enclosed trucks or railcars.
- 220 END OF WORK DAY** – The end of a working period that may include one or more work shifts but not later than 8 pm.
- 221 FABRIC FILTER BAGHOUSE** - Tube-shaped filter bags - long small-diameter fabric tubes referred to as 'bags' arranged in parallel flow paths and designed to separate particles and flue gas.
- 222 FREEBOARD** - The vertical distance between the top edge of a cargo container area and the highest point at which the bulk material contacts the sides, front, and back of a cargo container area.
- 223 FUGITIVE DUST CONTROL MEASURE** - A technique, practice, or procedure used to prevent or minimize the generation, emission, entrainment, suspension, and/or airborne transport of fugitive dust.
- 224 FUGITIVE DUST CONTROL TECHNICIAN** - A person with the authority to expeditiously employ sufficient fugitive dust control measures to ensure compliance with Rule 316 of these rules at an active operation.
- 225 FUGITIVE DUST EMISSION** - Particulate matter not collected by a capture system that is entrained in the ambient air and is caused from human and/or natural activities.
- 226 GRINDING MILL** - A machine used for the wet or dry fine crushing of any nonmetallic mineral. Grinding mills include, but are not limited to, the following types: hammer, roller, rod, pebble and ball, and fluid energy. The grinding mill includes the air conveying system, air separator, or air classifier, where such systems are used.
- 227 HAUL/ACCESS ROAD** – Any on-site unpaved road that is used by haul trucks to carry materials from the quarry to different locations within the facility.

- 228 HAUL TRUCK** - Any fully or partially open-bodied self-propelled vehicle including any non-motorized attachments, such as but not limited to, trailers or other conveyances that are connected to or propelled by the actual motorized portion of the vehicle used for transporting bulk materials.
- 229 INFREQUENT OPERATIONS** – Operations that have State mine identification, approved reclamation plans and bonding as required by State Mining And Reclamation Act of 1975, and only operate on an average of 52 days per year over the past three years from June 8, 2005.
- 230 MATERIAL DELIVERY TRUCK** – Any truck that loads and transports product to customers.
- 231 MIXER TRUCK** – Any truck that mixes cement and other ingredients in a drum to produce concrete.
- 232 MOTOR VEHICLE** - A self-propelled vehicle for use on the public roads and highways of the State of Arizona and required to be registered under the Arizona State Uniform Motor Vehicle Act, including any non-motorized attachments, such as but not limited to, trailers or other conveyances which are connected to or propelled by the actual motorized portion of the vehicle.
- 233 NEW FACILITY** - A facility subject to this rule that has not been operated by such facility prior to June 8, 2005.
- 234 NONMETALLIC MINERAL** - Any of the following minerals or any mixture of which the majority is any of the following minerals:
- 234.1** Crushed and broken stone, including limestone, dolomite, granite, rhyolite, traprock, sandstone, quartz, quartzite, marl, marble, slate, shale, oil shale, and shell.
 - 234.2** Sand and gravel.
 - 234.3** Clay including kaolin, fireclay, bentonite, fuller's earth, ball clay, and common clay.
 - 234.4** Rock salt.
 - 234.5** Gypsum.
 - 234.6** Sodium compounds including sodium carbonate, sodium chloride, and sodium sulfate.
 - 234.7** Pumice.
 - 234.8** Gilsonite.
 - 234.9** Talc and pyrophyllite.
 - 234.10** Boron including borax, kernite, and colemanite.
 - 234.11** Barite.
 - 234.12** Fluorspar.
 - 234.13** Feldspar.
 - 234.14** Diatomite.
 - 234.15** Perlite.
 - 234.16** Vermiculite.

- 234.17 Mica.
- 234.18 Kyanite including andalusite, sillimanite, topaz, and dumortierite.
- 234.19 Coal.

- 235 **NONMETALLIC MINERAL PROCESSING PLANT** - Any facility utilizing any combination of equipment or machinery that is used to mine, excavate, separate, combine, crush, or grind any nonmetallic mineral including, but not limited to, lime plants, coal fired power plants, steel mills, asphalt plants, concrete plants, Portland cement plants, and sand and gravel plants. Rock Product Processing Plants are included in this definition.
- 236 **OPEN STORAGE PILE** - Any accumulation of bulk material with a 5% or greater silt content which in any one point attains a height of three feet and covers a total surface area of 150 square feet or more. Silt content shall be assumed to be 5% or greater unless a person can show, by testing in accordance with ASTM Method C136-01 or other equivalent method approved in writing by the Control Officer and the Administrator of the Environmental Protection Agency (EPA), that the silt content is less than 5%. For the purpose of this rule, the definition of open storage pile does not include berms and guard rails that are installed to comply with 30 Code Of Federal Regulations (CFR) 56.93000.
- 237 **OVERBURDEN OPERATION** – An operation that removes and/or strips soil, rock, or other materials that lie above a natural nonmetallic mineral deposit and/or in-between a natural nonmetallic mineral deposit.
- 238 **PARTICULATE MATTER EMISSIONS** - Any and all finely divided solid or liquid materials other than uncombined water released to the ambient air as measured by the applicable state and federal test methods.
- 239 **PAVE** - To apply and maintain asphalt, concrete, or other similar material to a roadway surface (i.e., asphaltic concrete, concrete pavement, chip seal, rubberized asphalt, or recycled asphalt mixed with a binder).
- 240 **PORTLAND CEMENT PLANT** - Any facility that manufactures Portland Cement using either a wet or dry process.
- 241 **PRESSURE CONTROL SYSTEM** - System in which loads are moved in the proper sequence, at the correct time, and at the desired speed through use of valves that control the direction of air flow, regulate actuator speed, and respond to changes in air pressure.
- 242 **PROCESS** - One or more operations including those using equipment and technology in the production of goods or services or the control of by-products or waste.
- 243 **PROCESS SOURCE** - The last operation of a process or a distinctly separate process which produces an air contaminant and which is not a pollution abatement operation.

- 244 PRODUCTION WORK SHIFT** – An eight hour operating period based on the 24-hour operating schedule.
- 245 PUBLIC ROADWAYS** - Any roadways that are open to public travel.
- 246 RETURNED PRODUCTS** – Left-over concrete or asphalt products that were not used at a job site and were returned to the facility.
- 247 RUMBLE GRATE** – A system where the vehicle is vibrated while traveling over grates with the purpose of removing dust and other debris.
- 248 SCREENING OPERATION** - A device that separates material according to its size by passing undersize material through one or more mesh surfaces (screens) in series and retaining oversize material on the mesh surfaces (screens).
- 249 SILO** - An elevated storage container with or without a top that releases material thru the bottom.
- 250 SILT** - Any aggregate material with a particle size less than 75 micrometers in diameter, which passes through a No. 200 Sieve.
- 251 SPILLAGE** - Any quantity of nonmetallic minerals/materials that spill while being processed or after having been processed by an affected operation, where such spilled nonmetallic minerals/materials can generate or cause fugitive dust emissions.
- 252 STACK EMISSIONS** - The particulate matter emissions that are released to the atmosphere from a capture system through a building vent, stack or other point source discharge.
- 253 STAGING AREA** – A place where aggregate trucks and mixer trucks temporarily queue for their loading or unloading.
- 254 TEMPORARY FACILITY** - A facility that occupies a designated site for not more than 180 days in a calendar year.
- 255 TRACKOUT** - Any and all bulk materials that adhere to and agglomerate on the surfaces of motor vehicles, haul trucks, and/or equipment (including tires) and that have fallen or been deposited onto a paved area accessible to the public.
- 256 TRACKOUT CONTROL DEVICE** - A gravel pad, grizzly, wheel washer, rumble grate, paved area, truck washer, or other equivalent trackout control device located at the point of intersection of an unpaved area and a paved area accessible to the public that controls and prevents trackout and/or removes particulate matter from tires and the exterior surfaces of aggregate trucks, haul trucks, and/or motor vehicles that traverse a facility.

- 257 TRANSFER POINT** - A point in a conveying operation where nonmetallic mineral is transferred from or to a belt conveyor except for transfer to a stockpile.
- 258 TRUCK DUMPING** - The unloading of nonmetallic minerals from movable vehicles designed to transport nonmetallic minerals from one location to another. Movable vehicles include, but are not limited to, trucks, front end loaders, skip hoists, and railcars.
- 259 TRUCK WASHER** – A system that is used to wash the entire surface and the tires of a truck.
- 260 UNPAVED ROAD** – Any roads, equipment paths, or travel ways that are not covered by typical roadway materials. Public unpaved roads are any unpaved roadway owned by Federal, State, county, municipal, or governmental or quasi-governmental agencies. Private unpaved roads are all other unpaved roadways not defined as public. Unpaved internal roads are private unpaved roads within the facility's property boundary.
- 261 VENT** - An opening through which there is mechanically or naturally induced air flow for the purpose of exhausting air carrying particulate matter.
- 262 WHEEL WASHER** – A system that is capable of washing the entire circumference of each wheel of the vehicle.
- 263 WIND EVENT** - When the 60-minute average wind speed is greater than 25 miles per hour.

SECTION 300 - STANDARDS

301 NONMETALLIC MINERAL PROCESSING PLANTS - PROCESS EMISSION LIMITATIONS AND CONTROLS:

301.1 Process Emission Limitations: The owner and/or operator of a nonmetallic mineral processing plant shall not discharge or cause or allow to be discharged into the ambient air:

- a.** Stack emissions exceeding 7% opacity and containing more than 0.02 grains/dry standard cubic foot (gr/dscf) (50 mg/dscm) of particulate matter. Such stack emissions shall be vented to a properly sized fabric filter baghouse.
- b.** Fugitive dust emissions exceeding 7% opacity from any transfer point on a conveying system.
- c.** Fugitive dust emissions exceeding 15% opacity from any crusher.

- d. Fugitive dust emissions exceeding 10% opacity from any affected operation or process source, excluding truck dumping directly into any screening operation, feed hopper, or crusher.
- e. Fugitive dust emissions exceeding 20% opacity from truck dumping directly into any screening operation, feed hopper, or crusher.

301.2 Controls: For crushing and screening facilities, the owner and/or operator of a nonmetallic mineral processing plant shall implement all of the following process controls:

- a. Enclose sides of all shaker screens.
- b. Permanently mount watering systems (e.g., spray bars or an equivalent control) on:
 - (1) Inlet and outlet of all crushers;
 - (2) Outlet of all shaker screens; and
 - (3) Outlet of all material transfer points, excluding wet plants.

302 ASPHALTIC CONCRETE PLANTS - PROCESS EMISSION LIMITATIONS AND CONTROLS:

302.1 Process Emission Limitations: The owner and/or operator of an asphaltic concrete plant shall not discharge or cause or allow to be discharged into the ambient air:

- a. For non-rubberized asphaltic concrete plants, stack emissions exceeding 5% opacity and containing more than 0.04 gr/dscf (90 mg/dscm) of particulate matter over a 6-minute period.
- b. For rubberized asphaltic concrete plants (when producing rubberized asphalt only), stack emissions exceeding 20% opacity and containing more than 0.04 gr/dscf (90 mg/dscm) of particulate matter over a 6-minute period.
- c. From all cement, lime, and/or fly-ash storage silo(s), fugitive dust emissions exceeding 20% opacity.

302.2 Controls: The owner and/or operator of an asphaltic concrete plant shall implement all of the following process controls:

- a. On all cement, lime, and/or fly-ash storage silo(s), install an operational overflow warning system/device. The system/device shall be designed to alert operator(s) to stop the loading operation when the cement, lime, and/or fly-ash storage silo(s) are reaching a

capacity that could adversely impact pollution abatement equipment.

- b. On existing cement, lime, and/or fly-ash storage silo(s), install a properly sized fabric filter baghouse, with an opacity limit of not greater than 5% over a 6-minute period.
- c. On new cement, lime, and/or fly-ash storage silo(s), install a properly sized fabric filter baghouse or equivalent device designed to meet a maximum outlet grain loading of 0.01 gr/dscf, with an opacity limit of not greater than 5% over a 6-minute period.
- d. From all drum dryers, control and vent exhaust to a properly sized fabric filter baghouse, with an opacity limit of not greater than 5% over a 6-minute period.

303 CONCRETE PLANTS AND/OR BAGGING OPERATIONS - PROCESS EMISSION LIMITATIONS AND CONTROLS:

303.1 Process Emission Limitations: The owner and/or operator of a concrete plant and/or bagging operation shall not discharge or cause or allow to be discharged into the ambient air:

- a. Stack emissions exceeding 7% opacity.
- b. Fugitive dust emissions exceeding 10% opacity from any affected operation or process source, excluding truck dumping directly into any screening operation, feed hopper, or crusher.
- c. Fugitive dust emissions exceeding 20% opacity from truck dumping directly into any screening operation, feed hopper, or crusher.

303.2 Controls: The owner and/or operator of a concrete plant and/or bagging operation shall implement the following process controls:

- a. On all cement, lime, and/or fly-ash storage silo(s), install an operational overflow warning system/device. The system/device shall be designed to alert operator(s) to stop the loading operation when the cement, lime, and/or fly-ash storage silo(s) are reaching a capacity that could adversely impact pollution abatement equipment.
- b. On existing cement, lime, and/or fly-ash storage silo(s), install a properly sized fabric filter baghouse, with an opacity limit of not greater than 5% over a 6-minute period.

- c. On new cement, lime, and/or fly-ash storage silos, install a properly sized fabric filter baghouse or equivalent device designed to meet a maximum outlet grain loading of 0.01 gr/dscf.
- d. On dry mix concrete plant loading stations/truck mixed product, implement one of the following process controls:
 - (1) Install a rubber fill tube;
 - (2) Install a water spray;
 - (3) Install a properly sized fabric filter baghouse or delivery system;
 - (4) Enclose mixer loading stations such that no visible emissions occur; or
 - (5) Conduct mixer loading stations in an enclosed process building such that no visible emissions from the building occur during the mixing activities.
- e. On cement silo filling processing/loading operations controls, install a pressure control system designed to shut-off cement silo filling processes/loading operations, if pressure from delivery truck is excessive, as defined in O&M Plan.

304 OTHER ASSOCIATED OPERATIONS: All other affected operations or process sources not specifically listed in Sections 301, 302, or 303 of this rule associated with the processing of nonmetallic minerals, all other fugitive dust emission limitations not specifically listed in Section 306 of this rule, all other fugitive dust control measures not specifically listed in Section 307 of this rule, and all overburden operations shall, at a minimum, meet the provisions of Rule 310 of these rules.

305 AIR POLLUTION CONTROL EQUIPMENT AND APPROVED EMISSION CONTROL SYSTEM (ECS):

305.1 Operation And Maintenance (O&M) Plan Requirements For ECS:

- a. An owner and/or operator of a facility shall provide and maintain, readily available on-site at all times, (an) O&M Plan(s) for any ECS, any other emission processing equipment, and any ECS monitoring devices that are used pursuant to this rule or to an air pollution control permit.
- b. The owner and/or operator of a facility shall submit to the Control Officer for approval the O&M Plan(s) for each ECS and for each ECS monitoring device that is used pursuant to this rule.

- c. The owner and/or operator of a facility shall comply with all the identified actions and schedules provided in each O&M Plan.

305.2 Providing And Maintaining ECS Monitoring Devices: An owner and/or operator of a facility operating an ECS pursuant to this rule shall install, maintain, and calibrate monitoring devices described in the O&M Plan(s). The monitoring devices shall measure pressures, rates of flow, and/or other operating conditions necessary to determine if the control devices are functioning properly.

305.3 O&M Plan Responsibility: An owner and/or operator of a facility that is required to have an O&M Plan pursuant to Section 305.1 of this rule must fully comply with all O&M Plans that the owner and/or operator has submitted for approval, even if such O&M Plans have not yet been approved, unless notified in writing by the Control Officer.

306 FUGITIVE DUST EMISSION LIMITATIONS:

306.1 20% Opacity Limitation: The owner and/or operator of a facility shall not discharge or cause or allow to be discharged into the ambient air fugitive dust emissions exceeding 20% opacity, in accordance with the test methods described in Section 502 of this rule and in Appendix C (Fugitive Dust Test Methods) of these rules.

306.2 Visible Emission Limitation Beyond Property Line: An owner and/or operator of a facility shall not cause or allow fugitive dust emissions from any active operation, open storage pile, or disturbed surface area associated with such facility such that the presence of such fugitive dust emissions remain visible in the atmosphere beyond the property line of such facility.

306.3 Wind Event: The fugitive dust emission limitations described in Section 306.1 and Section 306.2 of this rule shall not apply during a wind event, if the owner and/or operator of a facility meets the following conditions:

- a. Has implemented the fugitive dust control measures described in Section 307 of this rule, as applicable;
- b. Has compiled and retained records, in accordance with Section 501.4 of this rule, and has documented by records the occurrence of a wind event on the day(s) in question. The occurrence of a wind event must be determined by the nearest Maricopa County Environmental Services Department Air Quality Division monitoring station, from any other certified meteorological station, or by a wind instrument that is calibrated according to manufacturer's standards and that is located at the site being checked; and

- c.** Has implemented the following high wind fugitive dust control measures, as applicable:
- (1)** For an active operation, implement one of the following fugitive dust control measures, in accordance with the test methods described in Section 503 and Section 504 of this rule and in Appendix C (Fugitive Dust Test Methods) of these rules:
 - (a)** Cease active operation that may contribute to an exceedance of the fugitive dust emission limitations described in Section 306.1 and Section 306.2 of this rule for the duration of the wind event and, if active operation is ceased for the remainder of the work day, stabilize the area; or
 - (b)** Maintain a visible crust by applying water or other suitable dust suppressant other than water or by implementing another fugitive dust control measure, in sufficient quantities to meet the stabilization standards described in Section 503 and Section 504 of this rule.
 - (2)** For an open storage pile, implement one of the following fugitive dust control measures, in accordance with the test methods described in Section 503 and Section 504 of this rule and in Appendix C (Fugitive Dust Test Methods) of these rules:
 - (a)** Maintain a visible crust by applying water or other suitable dust suppressant other than water or by implementing another fugitive dust control measure, in sufficient quantities to meet the stabilization standards described in Section 503 and Section 504 of this rule.
 - (b)** Cover open storage pile with tarps, plastic, or other material such that wind will not remove the covering, if open storage pile is less than eight feet high.
 - (3)** For a disturbed surface area, implement one of the following fugitive dust control measures, in accordance with the test methods described in Section 503 and Section 504 of this rule and in Appendix C (Fugitive Dust Test Methods) of these rules:
 - (a)** Uniformly apply and maintain surface gravel or a dust suppressant other than water; or

- (b) Maintain a visible crust by applying water or other suitable dust suppressant other than water or by implementing another fugitive dust control measure, in sufficient quantities to meet the stabilization standards described in Section 503 and Section 504 of this rule.

306.4 Silt Loading And Silt Content Standards For Unpaved Internal Roads And Unpaved Parking And Staging Areas: From unpaved internal roads and unpaved parking and staging areas, the owner and/or operator of a facility shall not discharge or allow to be discharged into the ambient air fugitive dust emissions exceeding 20% opacity, in accordance with the test methods described in Section 502 of this rule and in Appendix C (Fugitive Dust Test Methods) of these rules, and one of the following:

- a. Silt loading equal to or greater than 0.33 oz/ft²; or
- b. Silt content exceeding 6%.

306.5 Stabilization Standards:

- a. An owner and/or operator of a facility shall be considered in violation of this rule if any open storage pile and material handling or surface soils where support equipment and vehicles operate in association with such facility is not maintained in a manner that meets at least one of the standards listed below, as applicable.
 - (1) Maintain a visible crust;
 - (2) Maintain a threshold friction velocity (TFV) for disturbed surface areas corrected for non-erodible elements of 100 cm/second or higher;
 - (3) Maintain a flat vegetative cover (i.e., attached (rooted) vegetation or unattached vegetative debris lying on the surface with a predominant horizontal orientation that is not subject to movement by wind) that is equal to at least 50%;
 - (4) Maintain a standing vegetative cover (i.e., vegetation that is attached (rooted) with a predominant vertical orientation) that is equal to or greater than 30%;
 - (5) Maintain a standing vegetative cover (i.e., vegetation that is attached (rooted) with a predominant vertical orientation) that is equal to or greater than 10% and where the threshold friction velocity is equal to or greater than 43 cm/second when corrected for non-erodible elements;

(6) Maintain a percent cover that is equal to or greater than 10% for non-erodible elements; or

(7) Comply with a standard of an alternative test method, upon obtaining the written approval from the Control Officer and the Administrator of the Environmental Protection Agency (EPA).

- b. If no activity is occurring on an open storage pile and material handling or surface soils where support equipment and vehicles operate in association with such facility and if an open storage pile and material handling or surface soils where support equipment and vehicles operate in association with such facility contain more than one type of disturbance, soil, vegetation, or other characteristics, which are visibly distinguishable, each representative surface shall be tested separately for stability, in an area that represents a random portion of the overall disturbed conditions of the site, in accordance with the appropriate test methods described in Section 503 and Section 504 of this rule and in Appendix C (Fugitive Dust Test Methods) of these rules and shall be included in or eliminated from the total size assessment of disturbed surface area(s) depending upon test method results.

307 FUGITIVE DUST CONTROL MEASURES: The owner and/or operator of a nonmetallic mineral processing plant and/or a rock product processing plant shall implement the fugitive dust control measures described in this section of this rule. When selecting a fugitive dust control measure(s), the owner and/or operator of a facility may consider the site-specific and/or material-specific conditions and logistics of a facility. When doing so, some fugitive dust control measures may be more reasonable to implement than others. Regardless, any fugitive dust control measure that is implemented must achieve the applicable standard(s) described in Section 306 of this rule, as determined by the corresponding test method(s), as applicable, and must achieve other applicable standard(s) set forth in this rule. The owner and/or operator of a facility may submit a request to the Control Officer and the Administrator Of The Environmental Protection Agency (EPA) for the use of alternative control measure(s). The request shall include the proposed alternative control measure, the control measure that the alternative would replace, and a detailed statement or report demonstrating that the measure would result in equivalent or better emission control than the measures prescribed in this rule. Nothing in this rule shall be construed to prevent an owner and/or operator of a facility from making such demonstration. Following a decision by the Control Officer and the Administrator of the EPA to grant the petition, the facility shall incorporate the alternative control measure in any required Dust Control Plan.

307.1 Open Storage Piles And Material Handling: The owner and/or operator of a facility shall implement all of the following fugitive dust control

measures, as applicable, in compliance with Section 306.1 and Section 306.5 of this rule. For the purpose of this rule, open storage pile(s) and material handling does not include berms and guard rails that are installed to comply with 30 CFR 56.93000. However, such berms and guard rails shall be installed and maintained in compliance with Section 306.1 and Section 306.5 of this rule.

- a.** Prior to, and/or while conducting stacking, loading, and unloading operations, implement one of the following fugitive dust control measures:
 - (1)** Spray material with water, as necessary; or
 - (2)** Spray material with a dust suppressant other than water, as necessary.
- b.** When not conducting stacking, loading, and unloading operations, implement one of the following fugitive dust control measures:
 - (1)** Spray material with water, as necessary, in compliance with Section 306.1 and Section 306.5 of this rule;
 - (2)** Maintain a 1.5% or more soil moisture content of the open storage pile(s), in compliance with Section 306.1 and Section 306.5 of this rule;
 - (3)** Locate open storage pile(s) in a pit/in the bottom of a pit. If implementing this fugitive dust control measure, the owner and/or operator of a facility shall also comply with the stabilization standards in Section 306.5 of this rule.
 - (4)** Arrange open storage pile(s) such that storage pile(s) of larger diameter products are on the perimeter and act as barriers to/for open storage pile(s) that could create fugitive dust emissions. If implementing this fugitive dust control measure, the owner and/or operator of a facility shall also comply with the stabilization standards in Section 306.5 of this rule.
 - (5)** Meet one of the stabilization standards in Section 306.5 of this rule; or
 - (6)** Construct and maintain wind barriers, storage silos, or a three-sided enclosure with walls, whose length is no less than equal to the length of the pile, whose distance from the pile is no more than twice the height of the pile, whose height is equal to the pile height, and whose porosity is no more than 50%. If implementing this fugitive dust control

measure, the owner and/or operator of a facility shall also comply with the stabilization standards in Section 306.5 of this rule.

- c. When installing new open storage pile(s) at an existing facility and/or when installing new open storage pile(s) at a new facility, the owner and/or operator shall implement all of the following fugitive dust control measures in compliance with Section 306.1 and Section 306.5 of this rule, only if it is determined to be feasible on a case-by-case basis through the Dust Control Plan by assessing the amount of open land available at the property at the time the new open storage pile(s) are formed:
 - (1) Install the open storage pile(s) at least 25 feet from the property line; and
 - (2) Limit the height of the open storage pile(s) to less than 45 feet.
- d. For existing open storage pile(s) and when installing open storage pile(s) for an existing facility or for a new facility, if such open storage pile(s) will be constructed over eight feet high and will not be covered, then the owner and/or operator shall install, use, and maintain a water truck or other method that is capable of completely wetting the surfaces of open storage pile(s) in compliance with Section 306.1 and Section 306.5 of this rule.

307.2 Surface Stabilization Where Support Equipment And Vehicles

Operate: The owner and/or operator of a facility shall stabilize surface soils where loaders, support equipment, and vehicles will operate by implementing one of the following fugitive dust control measures, in compliance with Section 306.4 and/or Section 306.5 of this rule, as applicable:

- a. Pre-water surface soils;
- b. Apply and maintain a dust suppressant, other than water; or
- c. Apply a gravel pad, in compliance with the Section 307.6(b)(4) of this rule.

307.3 Haul/Access Roads:

- a. The owner and/or operator of a facility shall implement one of the following fugitive dust control measures, as applicable, in compliance with Section 306.4 of this rule, before engaging in the use of, or in the maintenance of, haul/access roads. Compliance with the provisions of this section of this rule shall not relieve any

person subject to the requirements of this section of this rule from complying with any other federally enforceable requirements (i.e., a permit issued under Section 404 of the Clean Water Act).

- (1) Install and maintain bumps, humps, or dips for speed control and apply water, as necessary;
 - (2) Limit vehicle speeds and apply water, as necessary;
 - (3) Pave;
 - (4) Apply and maintain a gravel pad in compliance with Section 307.6(b)(4) of this rule;
 - (5) Apply a dust suppressant, other than water; or
 - (6) Install and maintain a cohesive hard surface.
- b.** For a new facility, if implementing one of the fugitive dust control measures described in Section 307.3(a) of this rule is determined to be technically infeasible as obtained/approved in writing by the Control Officer and the Administrator of the Environmental Protection Agency (EPA) and as approved in the Dust Control Plan, then the owner and/or operator of a new facility shall maintain a minimum distance of 25 feet from the property line for haul/access roads associated with the new facility.

307.4 On-Site Traffic:

- a.** The owner and/or operator of a facility shall require all batch trucks and material delivery trucks to remain on internal roads with paved surfaces or cohesive hard surfaces in the permanent areas of the facility/operation that include entrances, exits, warehouses and maintenance areas, office areas, concrete plant areas, asphaltic plant areas, and parking and staging areas, as approved in the Dust Control Plan.
- b.** The owner and/or operator of a facility shall require all aggregate trucks to remain on internal roads subject to Section 307.4(a) of this rule, when entering and exiting aggregate loading areas/loading operations, as approved in the Dust Control Plan.
- c.** The owner and/or operator of a facility shall require all batch trucks and material delivery trucks to enter and exit the facility/operation only through entrances that comply with the trackout requirements in Section 307.5 of this rule and that comply with Section 306.5 of this rule.

307.5 Off-Site Traffic: When hauling and/or transporting bulk material off-site, the owner and/or operator of a facility shall implement all of the following control measures:

- a. Load all haul trucks such that the freeboard is not less than three inches;
- b. Prevent spillage or loss of bulk material from holes or other openings in the cargo compartment's floor, sides, and/or tailgate(s); and
- c. Cover haul trucks with a tarp or other suitable closure.

307.6 Trackout:

- a. **Rumble Grate And Wheel Washer:** The owner and/or operator of a new permanent facility and the owner and/or operator of an existing permanent facility with a minimum of 60 aggregate trucks, mixer trucks, and/or batch trucks exiting a facility on any day onto paved public roadways/paved areas accessible to the public shall install, maintain, and use a rumble grate and wheel washer, in accordance with all of the following conditions, as applicable. For the purpose of this rule, a vehicle wash and/or a cosmetic wash may be substituted for a wheel washer, provided such vehicle wash and/or cosmetic wash has at least 40 pounds per square inch (psi) water spray from the nozzle (owner and/or operator of the facility shall have a water pressure gauge available on-site to allow verification of such water pressure), meets the definition of wheel washer (i.e., is capable of washing the entire circumference of each wheel of the vehicle), is operated in such a way that visible deposits are removed from the entire circumference of each wheel of the vehicle exiting the wash, is installed, maintained, and used in accordance with criteria in Section 307.6(a)(1)-(5) of this rule, and is approved in the Dust Control Plan for the facility.

- (1) The owner and/or operator of a facility shall locate a rumble grate within 10 feet from a wheel washer. The rumble grate and wheel washer shall be located no less than 30 feet prior to each exit that leads to a paved public roadway/paved area accessible to the public and that is used by aggregate trucks, mixer trucks, and/or batch trucks. The owner and/or operator of a facility may be allowed to install a rumble grate and wheel washer less than 30 feet prior to each exit, if the owner and/or operator of a facility can demonstrate to the Control Officer by September 30, 2005, that there is not adequate space to install a rumble grate and wheel washer no less than 30 feet prior to each exit and that a rumble

grate and wheel washer at a shorter distance will be adequate to prevent trackout.

- (2) The owner and/or operator of a facility shall ensure that all aggregate trucks, mixer trucks, and/or batch trucks exit the facility via the rumble grate first and then the wheel washer.
- (3) The owner and/or operator of a facility shall post a sign by the rumble grate and wheel washer to designate the speed limit as 5 miles per hour.
- (4) The owner and/or operator of a facility shall pave the internal roads from the rumble grate and wheel washer to the facility exits leading to paved public roadways/paved areas accessible to the public.
- (5) The owner and/or operator of a facility shall ensure that all aggregate trucks, mixer trucks, and/or batch trucks remain on the paved internal roads between the rumble grate and wheel washer and the facility exits leading to paved public roadways/paved areas accessible to the public.

b. Rumble Grate, Wheel Washer, Or Truck Washer: The owner and/or operator of a facility not subject to Section 307.6(a) of this rule shall install, maintain, and use a rumble grate, wheel washer, or truck washer in accordance with all of the following:

- (1) A rumble grate, wheel washer, or truck washer shall be located no less than 30 feet prior to each exit that leads to a paved public roadway/paved area accessible to the public and that is used by aggregate trucks, mixer trucks, and/or batch trucks. The owner and/or operator of a facility may be allowed to install a rumble grate, wheel washer, or truck washer less than 30 feet prior to each exit, if the owner and/or operator of a facility can demonstrate to the Control Officer by September 30, 2005, that there is not adequate space to install a rumble grate, wheel washer, or truck washer no less than 30 feet prior to each exit and that a rumble grate, wheel washer, or truck washer at a shorter distance will be adequate to prevent trackout.
- (2) The owner and/or operator of a facility shall ensure that all aggregate trucks, mixer trucks, and/or batch trucks exit the facility via a rumble grate, wheel washer, or truck washer.
- (3) The owner and/or operator of a facility shall post a sign by the rumble grate, wheel washer, or truck washer to designate the speed limit as 5 miles per hour.

(4) If haul/access roads/internal roads are unpaved between the rumble grate, wheel washer, or truck washer and the facility exits leading to paved public roadways/paved areas accessible to the public, a gravel pad shall be installed, maintained, and used from the rumble grate, wheel washer, or truck washer to such paved public roadways/paved areas accessible to the public in accordance with all of the following:

(a) Gravel pad shall be designed with a layer of washed gravel, rock, or crushed rock that is at least one inch or larger in diameter and 6 inches deep, 30 feet wide, and 50 feet long and shall be flushed with water or completely replaced as necessary to comply with the trackout threshold described in Section 307.6(d) of this rule.

(b) Gravel pad shall have a gravel pad stabilizing mechanism/device (i.e., curbs or structural devices along the perimeter of the gravel pad) and shall be flushed with water or completely replaced as necessary to comply with the trackout threshold described in Section 307.6(d) of this rule.

c. **Exemptions For Wheel Washers:** The owner and/or operator of a facility shall not be required to install, maintain, and use a wheel washer, if any one of the following are applicable:

(1) A facility has all paved internal roads and meters aggregate or related materials directly to a ready-mix or hot mix asphalt truck, with the exception of returned products. The owner and/or operator of the facility shall install, maintain, and use a rumble grate in compliance with Section 307.6(b) of this rule.

(2) A facility is less than 5 acres in land size and handles recycled asphalt and recycled concrete exclusively. The owner and/or operator of the facility shall install, maintain, and use a rumble grate in compliance with Section 307.6(b) of this rule and shall install a gravel pad in compliance with Section 307.6(b)(4) of this rule on all unpaved internal roads leading to the facility exits leading to paved public roadways/paved areas accessible to the public.

(3) A facility has a minimum of ¼ mile paved internal roads leading from a rumble grate to the facility exits leading to paved public roadways/paved areas accessible to the public.

- (4) A facility meets the definition of infrequent operations, as defined in Section 230 of this rule. The owner and/or operator of the facility shall install, maintain, and use a rumble grate in compliance with Section 307.6(b) of this rule and shall install a gravel pad in compliance with Section 307.6(b)(4) of this rule. The gravel pad shall be installed for a distance of no less than 100 feet from the rumble grate to the facility exits leading to paved public roadways/paved areas accessible to the public. The owner and/or operator of the facility shall keep records in accordance with Section 500 of this rule, as applicable. The owner and/or operator of the facility shall notify the Control Officer in the event that the facility will operate more than 52 days per year based on the average rolling 3-year period after June 8, 2005 and the owner and/or operator of the facility shall comply with Section 307.6 of this rule, as applicable.

d. **Trackout Distance:** An owner and/or operator of a facility shall not allow trackout to extend a cumulative distance of 25 linear feet or more from all facility exits onto paved areas accessible to the public. Notwithstanding the proceeding, the owner and/or operator of a facility shall clean up all other trackout at the end of the workday.

e. **Cleaning Paved Internal Roads:** The owner and/or operator of a facility shall clean all paved internal roads in accordance with all of the following as applicable:

(1) The owner and/or operator of a facility with a minimum of 60 aggregate trucks, mixer trucks, and/or batch trucks exiting the facility on any day shall sweep the paved internal roads with a street sweeper by the end of each production work shift, if there is evidence of dirt and/or other bulk material extending a cumulative distance of 12 linear feet or more on any paved internal road.

(2) The owner and/or operator of a facility with less than 60 aggregate trucks, mixer trucks, and/or batch trucks exiting the facility on any day shall sweep the paved internal roads with a street sweeper by the end of every other work day. On the days that paved internal roads are not swept, the owner and/or operator of a facility shall apply water as necessary to comply with Section 306 of this rule on at least 100 feet of paved internal roads or the entire length of paved internal roads leading to an exit to paved public roadways/paved areas accessible to the public, if such roadways are less than 100 feet long.

- (3) The owner and/or operator of a facility, who purchases street sweepers after June 8, 2005, shall purchase street sweepers that meet the criteria of PM₁₀ efficient South Coast Air Quality Management Rule 1186 certified street sweepers.
- (4) The owner and/or operator of a new facility shall use South Coast Air Quality Management Rule 1186 certified street sweepers to sweep paved internal roads.

307.7 Pad Construction For Processing Equipment: The owner and/or operator of a facility shall implement, maintain, and use fugitive dust control measures during the construction of pads for processing equipment and shall identify, in the Dust Control Plan, such fugitive dust control measures.

307.8 Spillage: In addition to complying with the fugitive dust emission limitations described in Section 306 of this rule and implementing fugitive dust control measures described in Section 307.1 through Section 307.9 of this rule, as applicable, the owner and/or operator of a facility shall implement one of the following fugitive dust control measures, as applicable, when spillage occurs:

- a. Promptly remove any pile of spillage on paved haul/access roads/paved internal roads;
- b. Maintain in a stabilized condition any pile of spillage on paved haul/access roads/paved internal roads and remove such pile by the end of each day; or
- c. Maintain in a stabilized condition all other piles of spillage with dust suppressants until removal.

307.9 Night-Time Operations: The owner and/or operator of a facility shall implement, maintain, and use fugitive dust control measures at night, as approved in the Dust Control Plan.

308 FUGITIVE DUST CONTROL TECHNICIAN: The owner and/or operator of a facility with a rated or permitted capacity of 25 tons or more of material per hour shall have in place a Fugitive Dust Control Technician or his designee, who shall meet all of the following qualifications:

308.1 Be authorized by the owner and/or operator of the facility to conduct routine inspections, recordkeeping, and reporting to ensure that all fugitive dust control measures are installed, maintained, and used in compliance with this rule.

308.2 Be authorized by the owner and/or operator of the facility to install, maintain, and use fugitive dust control measures, deploy resources, and shutdown or modify activities as needed.

308.3 Be available within 30 minutes.

308.4 Be issued a valid Certificate Of Completion of the Maricopa County Fugitive Dust Control Class.

308.5 Be certified to determine opacity as visible emissions in accordance with the provisions of the EPA Method 9 as specified in 40 CFR, Part 60, Appendix A.

309 DUST CONTROL PLAN: The owner and/or operator of a facility shall submit, to the Control Officer, a Dust Control Plan that describes all fugitive dust control measures to be implemented, in order to comply with Section 306 and Section 307 of this rule. The Dust Control Plan shall, at a minimum, contain all the information described in Rule 310 (Fugitive Dust) of these rules. All other criteria associated with the Dust Control Plan shall meet the criteria described in Rule 310 (Fugitive Dust) of these rules.

SECTION 400 - ADMINISTRATIVE REQUIREMENTS

401 COMPLIANCE SCHEDULE: The newly amended provisions of this rule shall become effective upon adoption of this rule and the following schedule applies:

401.1 Dust Control Plan: When complying with Section 309 of this rule, if a Dust Control Plan is required to be revised, then a revised Dust Control Plan shall be submitted to the Control Officer by September 30, 2005 or three months after rule adoption, whichever comes first.

401.2 Pressure Control System: When complying with Section 303.2(e) of this rule, a pressure control system shall be installed by December 31, 2005 or six months after rule adoption, whichever comes first.

401.3 Operational Overflow Warning System/Device: When complying with Section 302.2(a) and/or Section 303.2(a) of this rule, an operational overflow warning system/device shall be installed by December 31, 2005 or six months after rule adoption, whichever comes first.

401.4 Fugitive Dust Control Technician: When complying with Section 308 of this rule, a Fugitive Dust Control Technician shall be in place by December 31, 2005 or six months after rule adoption, whichever comes first.

401.5 Surface Stabilization Where Support Equipment And Vehicles Operate: When complying with Section 307.2 of this rule, surface stabilization and/or paving shall be completed by December 31, 2005 or six months after rule adoption, whichever comes first.

401.6 Trackout: When complying with Section 307.6 of this rule, a rumble grate, wheel washer, or truck washer shall be installed and a schedule for using PM₁₀ efficient South Coast Air Quality Management Rule 1186 certified street sweepers shall be in place by January 1, 2006.

401.7 Process Emission Limitations And Controls: When complying with Section 301, Section 302, and/or Section 303 of this rule, process emission limitations shall be complied-with and controls shall be installed by December 31, 2005 or six months after rule adoption, whichever comes first.

SECTION 500 - MONITORING AND RECORDS

501 RECORDKEEPING AND REPORTING: Any owner and/or operator of a facility subject to this rule shall comply with the following requirements. Records shall be retained for five years and shall be made available to the Control Officer upon request.

501.1 Operational information required by this rule shall be kept in a complete and consistent manner on-site and be made available without delay to the Control Officer upon request.

501.2 Records of the following process and operational information, as applicable, are required:

- a. General Data:** Daily records shall be kept for all days that a facility is actively operating. Records shall include all of the following:
 - (1)** Hours of operation;
 - (2)** Type of batch operation (wet, dry, central);
 - (3)** Throughput per day of basic raw materials including sand, aggregate, cement (tons/day);
 - (4)** Volume of concrete and asphaltic concrete produced per day;
 - (5)** Volume of aggregate mined per day (cubic yards/day); and
 - (6)** Amount of each basic raw material including sand, aggregate, cement, fly ash delivered per day (tons/day).
- b. Additional Data For Dry Mix Concrete Plants And/Or Bagging Operations:** Records shall include all of the following:
 - (1)** Number of bags of dry mix produced;

- (2) Weight (size) of bags of dry mix produced;
 - (3) Kind and amount of fuel consumed in dryer (cubic feet/day or gallons/day); and
 - (4) Kind and amount of any back-up fuel, if any.
- c. **Control And Monitoring Device Data:** Records shall include all of the following:
- (1) For a fabric filter baghouse:
 - (a) Date of inspection;
 - (b) Date and designation of bag replacement;
 - (c) Date of service or maintenance related activities; and
 - (d) Time, date, and cause of fabric filter baghouse failure and/or down time, if applicable.
 - (2) For a scrubber:
 - (a) Date of service or maintenance related activities;
 - (b) Liquid flow rate;
 - (c) Other operating parameters that need to be monitored to assure that the scrubber is functioning properly and operating within design parameters; and
 - (d) Time, date, and cause of scrubber failure and/or down time, if applicable.

501.3 ECS O&M Plan Records: An owner and/or operator of a facility shall maintain all of the following records in accordance with an approved O&M Plan:

- a. Periods of time that an approved ECS is operating to comply with this rule;
- b. Periods of time that an approved ECS is not operating;
- c. Flow rates;
- d. Pressure drops;

- e. Other conditions necessary to determine if the approved ECS is functioning properly;
- f. Results of visual inspections; and
- g. Correction action taken, if necessary.

501.4 Dust Control Plan Records: An owner and/or operator of a facility shall compile, maintain, and retain records as described in Rule 310 (Fugitive Dust) of these rules.

502 COMPLIANCE DETERMINATION - 40 PART 60, APPENDIX A TEST METHODS ADOPTED BY REFERENCE: The test methods for those subparts of CFR Part 60, Appendix A, adopted as of July 1, 2004, as listed below, are adopted by reference as indicated. This adoption by reference includes no future editions or amendments. Copies of test methods referenced in Section 502 of this rule are available at the Maricopa County Environmental Services Department, 1001 North Central Avenue, Phoenix, Arizona, 85004-1942. When more than one test method is permitted for a compliance determination, then an exceedance of the limits established in this rule, determined by any of the applicable test methods, constitutes a violation of this rule.

502.1 Grain Loading: Particulate matter and associated moisture content shall be determined using the applicable EPA Reference Methods 1 through 5, 40 CFR Part 60, Appendix A.

502.2 Opacity Determination: Opacity observations to measure the opacity of visible emissions shall be conducted in accordance with the test methods described in Appendix C (Fugitive Dust Test Methods) of these rules.

503 COMPLIANCE DETERMINATION - SOIL MOISTURE CONTENT AND SOIL COMPACTION CHARACTERISTICS TEST METHODS ADOPTED BY REFERENCE:

503.1 ASTM Method D2216-98 ("Standard Test Method For Laboratory Determination Of Water (Moisture) Content Of Soil And Rock By Mass"), 1998 edition.

503.2 ASTM Method D1557-91 (1998) ("Test Method For Laboratory Compaction Characteristics Of Soil Using Modified Effort (56,000 ft-lbf/ft³ (2,700 kN-m/m³))), 1998 edition.

504 COMPLIANCE DETERMINATION - STABILIZATION STANDARDS TEST METHODS ADOPTED BY REFERENCE: The stabilization standards described in Section 306.5 of this rule shall be determined by using the following test methods in accordance with Appendix C (Fugitive Dust Test Methods) of these rules:

- 504.1** Appendix C, Section 2.1.1 (Silt Content Test Method) of these rules to estimate the silt content of the trafficked parts of unpaved roads and unpaved parking lots.
- 504.2** Appendix C, Section 2.3 (Test Methods For Stabilization-Visible Crust Determination) (The Drop Ball/Steel Ball Test) of these rules for a visible crust.
- 504.3** Appendix C, Section 2.4 (Test Methods For Stabilization-Determination Of Threshold Friction Velocity (TFV)) (Sieving Field Procedure) of these rules for threshold friction velocity (TFV) corrected for non-erodible elements of 100 cm/second or higher.
- 504.4** Appendix C, Section 2.5 (Test Methods For Stabilization-Determination Of Flat Vegetative Cover) of these rules for flat vegetation cover (i.e., attached (rooted) vegetation or unattached vegetative debris lying on the surface with a predominant horizontal orientation that is not subject to movement by wind) that is equal to at least 50%.
- 504.5** Appendix C, Section 2.6 (Test Methods For Stabilization-Determination Of Standing Vegetative Cover) of these rules for standing vegetation cover (i.e., vegetation that is attached (rooted) with a predominant vertical orientation) that is equal to or greater than 30%.
- 504.6** Appendix C, Section 2.6 (Test Methods For Stabilization-Determination Of Standing Vegetative Cover) of these rules for standing vegetation cover (i.e., vegetation that is attached (rooted) with a predominant vertical orientation) that is equal to or greater than 10% and where the threshold friction velocity is equal to or greater than 43 cm/second when corrected for non-erodible elements.
- 504.7** Appendix C, Section 2.7 (Test Methods For Stabilization-Rock Test Method) of these rules for a percent cover that is equal to or greater than 10%, for non-erodible elements.
- 504.8** An alternative test method approved in writing by the Control Officer and the Administrator of the EPA.

505 CERTIFIED STREET SWEEPING EQUIPMENT LIST ADOPTED BY REFERENCE: The list of street sweeping equipment (as of July 9, 2004) that has met the South Coast Air Quality Management Rule 1186 certification standards is found in support documents for the South Coast Air Quality Management District Regulation XI (Source Specific Standards), Rule 1186 (PM₁₀ Emissions From Paved And Unpaved Roads And Livestock Operations) and is adopted by reference. A copy of the list of certified street sweeping equipment can also be obtained at Maricopa County Air Quality Department, 1001 North Central Avenue, Phoenix, Arizona, 85004.